# THE VETERINARY RECORD

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## Scarlet Fever and Cows.

Prejudice dies hard, its vitality is immense but its danger is often still greater.

It is now an old, old story, how a certain distinguished head of the Medical Department of the Local Government Boad conceived that because scarlet fever in the human subject was often traceable to milk, that therefore the cows supplying it must be at fault. Fortunately for the theory of this gentleman, his subordinates succeeded in finding material to support the views of their chief; it was the celebrated Hendon outbreak, when cows with teat eruptions and a few bare patches of hair came into such notoriety, and the public, both medical and lay, eager to lay hold of anything which would explain the often complete obscurity which surrounds outbreaks of this disease, swallowed readily the pill prepared for them.

Strange to say the only obdurate patients who refused their medicine, were an insignificant body of men, who from their position relative to the suspected animals had opportunities of judging of the value of the theory far and away greater than any member of the medical profession could ever possess. The veterinary profession sternly opposed and fairly met every argument put forward in favour of the new theory, but so far as we can learn, no member of the medical profession (not in our own body) has ever become a convert to our view, or acknowledged the fallacy of the then Local Government Board reasoning. In the same way we are assured that no member of our body has ever gone over to the opposition, and for reasons which are only too self-evident.

If teat eruption and bare patches of hair in the cow constitute the poison of scarlet fever in man, outbreaks on an extended scale would be matters of weekly if not of daily occurrence all over the country. As a profession we recognise the common nature of these teat eruptions, some of which are non-specific and others of specific origin. We know the only specific eruption is that of cow pox, while the non-specific eruptions are due to causes not difficult to understand, when we remember the condition of life of the ordinary dairy cow, and the injuries and dirt to which the teats and udders are exposed.

In spite of our protests, in spite of the fact that we are unanimous in saying that there is no such disease as scarlet fever in the cow, in spite of the fact that it has been shown beyond dispute that these udder eruptions are capable of giving rise to typical cow pox vesicles in the human subject, yet we find that even the most enlightened authorities in the public health department are wasting their energies and misleading the public over the cow origin of scarlet fever!

In our last issue we reprinted from *The Lancet* a report on the outbreak of this disease at Blackheath, and although the Medical Officer failed, as of course he would, to fasten the epidemic on the cows, the greatest stress is laid on the presence of teat eruptions and loss of patches of hair amongst certain cows of the suspected dairy. That the dairy was suspected there is the best of reasons for believing, when we are told that *there had been scarlet fever amongst those who were brought in contact with the milk and cows*, but the reports add naively that there could be no doubt that these cases were in all probability the *victims* and not the cause of the outbreak!

The veterinary profession has shewn in the most complete manner, that the eruptions on the udders and bare patches on the skin of cows which the medical authorities regard as the cause of scarlet fever are as common as possible, and exist where scarlet fever does not exist. It would be as reasonable to regard an udder soiled by fæces as the cause of scarlet fever, as to regard these eruptions as the source of human trouble. The soiled udder would possess advantages equal to those of the chapped teats, inasmuch as it could always be found by looking for!

Let the medical profession honestly acknowledge they have blundered by dealing with that with which they were not competent. We would probably have made the same bungle had we departed from our legitimate sphere and dabbled with human pathology. There can be no doubt that scarlet fever often has its origin in the dairy, that we do not for one moment deny, but we say—and nothing which has ever been put forward by the medical authorities has disproved it—that the milk in this case has become affected *from a human source* and not from the cow, and during all the years this controversy has been going out, and the endless opportunities which have offered themselves to prove the incorrectness of our views, it has never been done, and our position is as strong and as unassailable as ever.

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## International Congress of Hygiene at Buda Pesth.

In the veterinary section up to the 31st March there were announced thirty-eight papers. Tuberculin and Mallein divide the honor of creating the largest amount of interest, and produce between them eleven papers. There are four papers on foot-and-mouth, three each on tuberculosis, parasites, protective vaccination, and milk control.

A total of 587 papers dealing with Hygiene, and 131 with demography are announced.

## CASES AND ARTICLES

### THE NATURE OF THE RESPIRATORY MOVEMENTS IN HYDROTHORAX.

By Vet.-Capt. F. Smith, A.V.D., Aldershot.

There would be few people of any experience inclined to deny the value of the character of the breathing in determining the presence of effusion in the chest of horses.

I have certainly met with cases where the breathing never really aroused my suspicions, and yet fluid was found in the chest post-mortem, but in the large bulk of the cases it is otherwise, and a change in the character of the breathing is an ominous symptom in acute pleurisy.

The peculiar character of the breathing has long been recognised, and I think I am correct in saying, quoting from memory, that it has been described in our text books as resembling that of broken wind, and to an extent this is true.

If, however, we carefully watch the breathing of a horse the subject of well-marked pleural effusion, certain peculiarities are present which do not exist in broken wind. In the latter disease we have a well-marked inspiration followed by a double expiration, with a distinct interval of time between each expiration, and the respirations are laboured and much faster than normal; in pleural effusion we have a laboured respiration, a peculiar double see-saw movement of the abdominal wall but no double expiration.

The point on which I would insist as a distinction between the two respirations is that broken wind has a double expiration, pleural effusion has not.

Yet there is a double movement in the abdominal wall of the horse with effusion which requires some description and explanation.

During normal inspiration the diaphragm, principally at its upper half and sides, recedes and carries back with it whatever is behind it, viz., liver, stomach and bowels, so that at every inspiration and expiration these organs are moving backwards and forwards with the diaphragm, to an extent which is greater above than below, but at its greatest does not probably exceed 4 or 5 inches.

In pleural effusion there would be no difficulty in the diaphragm receding were it not for the almost invariable adhesions which by this time the lungs have formed with it, and even these adhesions would not necessarily prevent it, were it not for the partially collapsed condition of the lungs which prevents them from expanding and keeping touch with the diaphragm and chest wall.

These factors, therefore, prevent the lungs from following the diaphragm backwards, and further they limit the movements of the diaphragm, the result being that there is a distinct difficulty in inspiration, which is intensified by the fact that the patient is by no means anxious to fill his lungs with air.

When effusion has occurred the short difficult retreat of the diaphragm becomes hastened by the pressure of several pounds of fluid on its anterior surface, and willing or unwilling the diaphragm is carried back to a greater degree than before effusion.

If we watch a horse with hydrothorax inspire, it will be found that the first movement of inspiration is not a relaxation of the abdominal wall *but actually a contraction or ascent of it*, in fact it looks like the movements of expiration instead of inspiration.

But the entire abdominal wall does not ascend in hydrothorax inspiration, sometimes (and on this point my notes are at variance) it is the anterior sometimes the posterior half; viz., sometimes the ascent is in front of the stifle, at other times behind the sternum, but at whichever of these two places the upward movement occurs, a downward movement at the same time follows at the other end. Speaking with all needful caution, I think it will be found that as a rule the anterior abdominal wall behind the sternum goes up during inspiration rather than the posterior.

The drawing up of the abdominal wall is caused by the rectus muscle, and a ridge is produced along the edges of the cartilages of the false ribs, along which a wave propagates itself in the direction of the flank; we will speak of this ridge as the costal ridge. The contracted abdominal wall representing inspiration now suddenly drops, whilst the opposite end ascends; this ascent is expiration, which is carried out slowly by the abdominal muscles being drawn up under the cartilages of the ribs, and pressing the upper part of the flank outwards.

I can make no positive statement as to whether the anterior or posterior abdominal wall is the first to go up in inspiration, or whether the costal ridge is more prominent at inspiration or expiration, because, as I have inferred, my notes on the subject do not agree, but I can be positive on the point of practical interest that inspiration in hydrothorax is attended by a drawing up of the abdominal wall, which makes it look exactly like an expiration instead of an inspiration.

Speaking generally, and in broad terms, and designating the abdominal wall anteriorly placed as A, and that in front of the stifle as B, we may say that A goes up in inspiration whilst B descends, B goes up in expiration whilst A descends. Thus we have a see-saw like movement with a well-marked costal ridge above, and an inward and outward movement of the hollow of the flank just in front of the anterior process of the ilium, which in my experience is diagnostic of pleural effusion.

That the chest should have some difficulty in emptying itself of air is readily understood, the weight of fluid on the anterior surface of the diaphragm must prove an obstinate mechanical factor, especially as the further the diaphragm advances, the higher the fluid rises which is pressing against it; the difficulty of expiration requires no further explanation, but the peculiarity of inspiration cannot be so lightly dismissed.

Why should any part of the abdominal wall contract during the inspiration of a patient with pleuritic effusion?

I must confess that my answer to this question is imperfect, but it appears to me that a possible explanation may be as follows:—We know that respiration can be carried out without the use of the abdominal muscles, viz., solely by the diaphragm and the elastic recoil of the lungs. During an attack of pleurisy the respiration is mainly short and diaphragmatic, and in this way movement of the ribs is to an extent avoided. When effusion occurs the pressure on the anterior face of the diaphragm is such that a deeper inspiration would be taken than the animal likes, but to avoid this undue retreat of the diaphragm the abdominal muscles contract, and force the abdominal contents against the diaphragm and so steady its retreat; by this time the amount of air having been taken in, the abdominal wall drops suddenly and expiration follows in the ordinary way.

I conceive, therefore, that in the patient with hydrothorax the contraction of the abdominal wall during inspiration is to steady the retreat of the diaphragm, and prevent it being hurried back by the enormous pressure exercised on its anterior face by the weight of a few gallons of fluid.

## FRACTURE OF THE ATLAS IN A COW.

By Wm. T. D. Broad, M.R.C.V.S.

On Friday August 17th we were called to see a cow, seven miles distant, which was said to have hurt herself by getting fast in a gate. On arrival we learnt that the cow, a small shorthorn, two hours previously became fixed by her horns between the top rails of a five-barred gate, and in trying to extricate herself had pulled the gate from its hinges and rolled down a slope with it still on her head. A neighbour seeing the catastrophe released the poor beast by sawing through one of the bars. The cow remained recumbent in a stupefied state for about 1½ hours and then got up.

When we arrived she was standing with her poll drawn to the right side and her muzzle turned to the left, appearing as if the head was slightly twisted. She walked to the farmyard, a distance of a quarter of a mile, with comparative facility; the pupil of the left eye was dilated, pulse accelerated, respirations and temperature normal.

The following day she was down and unable to rise, but could manage to drag herself around the box; feeding and ruminating fairly well, bowels, etc. acting, pulse, respirations and temperature normal. In this condition she remained till the following Thursday when she gradually became semicomatose during the day, holding her head round to either side according to which side she was lying on, appetite lost and rumination suspended; the fæces and urine were voided involuntarily, and paraplegia now became complete. The following day, Friday, just a week after the accident, coma had become more pronounced, and slaughter was advised.

*Post-mortem* revealed a comminuted fracture of the left moiety of the odontoid process of the atlas, involving the whole of the articulatory surface on that side. The spinal cord with its membranes at the seat of injury presented blood extravasations and a quantity of serosity.

There were apparently no indications of fracture at first, nor was it suspected, as the cow walked with ease to the homestead and apparently knew her way; no swelling was visible at any time, and a careful manual examination of the head and neck was made without discovering anything; crepitation was not carefully listened for, as it was thought unadvisable to pull the head about.

Diagnosis, brain pressure; prognosis guarded.

## CALCULUS WITH ULCERATION OF LARGE COLON.

By Jno. B. Wolstenholme, F.R.C.V.S., Manchester.

Cart mare twelve years old. This mare had a troublesome eczema affecting mainly the sides and abdomen about twelve months ago. She was admitted into hospital in a similar condition early in July of this year, all was apparently going well when on August 17th she went off her feed, and commenced purging—this from no ascertainable cause—pulse 60 weak. A little mixt. cretæ cum chlorodyne stayed the diarrhœa. There was no uneasiness or other evidence of abdominal pain. The other symptoms continued, i.e. loathing of food, foul tongue, conjunctivæ very dark with venous congestion.

August 20th. No evidence of pain, blowing somewhat; pulse 80, very weak; temperature 102·0.

August 21st. Pulse quick and weak, temp. 102·6, blowing; stands in one place; is very weak.

August 22nd. Died at 2 p.m. A little previous to death, whilst on her legs, made a number of violent straining efforts, as though to void something per rectum or vagina.

*Post-mortem*. In the large colon was an exceedingly rough calculus, honey-combed in appearance, very similar to a clinker from a smith's fire. It was about 4in. by 5in., ovoid in shape. For a distance of thirty inches the bowel in the immediate vicinity was studded with many ulcers, varying in size from ½inch to 3 inches diameter, the periphery of each was depressed, with a black swollen centre. The mucous membrane only being affected. The calculus, surrounding bowel, and contents had an exceedingly fœtid odour. The thoracic and abdominal viscera were much congested with black tarry blood.

In this manner it seems to me that we are constantly being reminded that our cases have each of them an individuality, and that our diagnoses are not always verified point by point on post-mortem examination. In this case although death was plainly approaching I was certainly perplexed, and ignorant of the cause. On the whole the symptoms had appeared to be more like septic poisoning than anything else. Probably, in the light of the *post-mortem*, this factor may have had much to do with

death and with masking the local lesions and symptoms.

Another question which forces itself upon our notice is the possibility that the irritation of the bowel may have been the cause of the skin affection.

The details of treatment have, I think, little interest and bearing. When admitted in July a purgative was given, then small doses of sulph. sub. with mild local treatment. Two or three doses of creta cum chlorodyne were given during the diarrhœa; after which, noting the extreme depression and condition of the tongue, spts. ammon. co. with vegetable bitters were administered.

## PIG-SPAYING IN CANADA.

A correspondent of August 4th last, signing W. Astbury, asks if there is any Work treating on the subject of spaying pigs. It may prove interesting if I describe a method that is practised by some of the spayers and gelders who travel through the country.

Hearing that a man was to operate on some pigs at Waterdown I visited the farm and witnessed the operation. Having driven a stout nail into the lintel of the barn door about six feet from the ground, he produced a rope about half an inch thick and four feet long, on one end of which was a slip knot, this he fastened on the off hind leg above the hock, slinging little Mrs. pig over the nail, fastened the other hind leg by a double loop allowing the pig to hang head downwards and bringing the abdomen within easy reach in front. With an ordinary spaying knife he made an incision, starting about one inch below the pelvis to escape the bladder, and opened the abdomen along the linea alba about three inches; with his fore-finger he broke through the omentum and pulled the bowels out, letting them fall about eight or ten inches. He then inserted a metal probe, shaped like a male catheter, into the vagina to the body of the uterus, bringing it forward; he then pinched first one ovary and then the other, handing both to me; each was about the size of a small pea. Replacing the bowels, covering them again with the omentum, he inserted four strong and deep sutures into the skin, bringing the wound together as I thought rather too tight, dusting some preparation on which he would not disclose but smelling perceptibly of iodoform, let the pig down, ordering it to be put into a barn with some clean straw and not to be fed for twelve hours.

The time occupied was short, for the whole six—various ages from two to six months old—only took fifteen minutes. Fee for the six One Dollar (about four shillings). I am inclined to think this operation was originated in the Western States; they try all kinds of operations there, animal life being thought little of.

Seeing that the method was novel and hearing that it was completely successful, I tried the same process on a large bitch of the collie species, and proceeding exactly as I have described with the exception of taking a little more precaution as to cleanliness and also applying a pin bandage to the abdomen; she made a good recovery in seven days. I used iodoform and boracic acid, one to four of the latter; as a dusting powder I have never seen its equal.

What struck me as being remarkable was the very careless manner the operator tore through the omentum and pulled out the intestines. As it was his funeral and not mine I did not protest, but my astonshment must have been depicted in my face, for he explained that he rarely or ever lost one unless the farmer allowed the pigs to "bust themselves with food" for two or thee days afterwards, and that he always allowed the stitches to rot out, this I think is quite unnecessary as I removed them in three days, the wound having healed by first intention.

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## "VET."

The way in which a man or a profession is referred to by the press reflects pretty accurately the position he or it occupies in the esteem of the public generally. The press, notwithstanding its pretention, does not create, only reflects public opinion. Let me give an illustration from the lives of our public men. The late Lord Beaconsfield was during his life and is still better known as "Dizzy" than by any other name. So also with the late Lord Sherbrooke, is he not "Bob Lowe?" These two men great (clever is perhaps more appropriate) though they were in many respects did not occupy a high place in the esteem of the people of this country. Compare with these two contemporaries John Bright and W. H. Smith. What editor would venture to write of "Jack" Bright or "Bill" Smith. They deserved and enjoyed the respect of their follow citizens and therefore their very names were honoured.

As an instance of a profession, take the legal. The contempt with which it is as a whole regarded is easily seen by the applause which greets any uncomplimentary reference to it either on the platform or in the press.

It is for this reason chiefly that I regret to hear or read of members of our profession being alluded to as "vets." There is a disparaging note in it. In reports of trials we read of the evidence of "vets." At a horse show an animal is said to have been rejected by the "vets." Some celebrated racehorse is restricted to walking exercise by the "vet." A mysterious disease somewhere defies the skill of the "vets." A London daily has a paragraph with the heading "Jubilee of the Vets." Veterinary Surgeons are now asked to "vet" a horse, which means, I suppose, to examine him as to its soundness.

I do not believe that in every, or even in the majority of instances, any disrespect is intended, but at the same time accepting the most charitable interpretation it must be conceded that the abbreviation is not complimentary. The length of the word veter-

inary and the difficulty some people find in pronouncing it correctly—or indeed, at all—makes the short easily pronounced substitute a welcome escape.

Members of the other branch of medicine are not called "docs" nor are dentists called "dents." Why then should we suffer the indignity of being called "vets?" In America physicians, surgeons, veterinary surgeons and dentists are all packed together and labelled "docs." If a Yankee breaks his leg he sends for a "doc," if his horse breaks his leg he sends for a "doc," if his child wants a tooth taken out or one put in he still sends for a "doc." There is some consistency in this although it may be confusing to the servant who sorts the "docs." If injustice be done it is done to the whole medical profession. In this country our branch of the profession is singled out for unjust treatment.

What can be done to arrest a habit that will soon become so confirmed that "vet" will in future be the only title by which we shall be known? I think we can each of us within the sphere of our influence intimate that the abbreviation is opprobrious. Next we can send a courteous protest to the editor of the local papers in our respective districts, who permit their reporters to refer to our members in this offensive way. I have tried this plan with success. I even went further, and selected two of our London dailies for attack, and was agreeably surprised with the result. In fact from my own experience I am now convinced that if we all do what we can in this direction our object would soon be attained. Of course a matter of this kind requires a little tact. Lastly the editors of our own periodical literature should instruct their publishers not to allow the abbreviation "vet" to appear on their pages under any circumstances, not even in the advertisements. I should like before closing to acknowledge our indebtedness to the editor of *The Field* (I have done so privately already) for an able sympathetic leading article on this subject some twelve months ago.

J. FRASER.

St. Albans.

## VETERINARY SOCIETIES.

### SCOTTISH METROPOLITAN VETERINARY MEDICAL SOCIETY.

The summer meeting of the Scottish Metropolitan Veterinary Medical Society was held on Friday in the George Hotel, Buchanan Street, Glasgow. Professor W. O. Williams, New Veterinary College, Edinburgh, president, occupied the chair, and there was an attendance of about twenty.

The PRESIDENT, in opening the proceedings, said it might seem rather curious for the Eastern Society of Scotland to come to Glasgow, but they had done so with a good will. They had come with the hope not only of resuscitating, but of endeavouring to get the Western Society to hold its meetings as it used to do. For the last two years they had not held meetings, and they in the East were beginning to be afraid that the Western Society was dying, if it was not dead. Since calling that meeting they had learned that the Glasgow Society was still alive, and was only, like bears, hibernating, and they hoped that they would come out again and give them good papers. There was in existence not only the Eastern and the Western Society, but there was an endeavour being made at present to make a Northern Society; and it was hoped that all three Societies would join shoulder and shoulder and work together without ill feeling. It had been suggested that there had been some little ill-feeling between the East and the West, and the West was rather inclined to think that they came there to try and rob them of intending members, but they had visited Glasgow for no such purpose. On the contrary, he hoped the East and West would join together and assist the North by giving them a good start in the world—(applause). Their Society had been prospering very much indeed of late years. They started as a portion of an old Society; but they had grown stronger and stronger, until now they were the strongest Society in Scotland as regarded numbers. It behoved them all to do their best to keep together, because nowadays, what with Government intervention and the wholesale slaughter of animals, the time would soon come when they would have no animals to treat, or if they had, they would be pet animals. They were slaughtering for glanders, for swine fever, and next they might even slaughter for scab—(laughter). At this rate they would soon have nothing to do. They must, therefore work together, and endeavour to make their fortunes while they had a chance.

#### VENTILATION AND DRAINAGE.

Professor JAMES HUNTER, F.R.C.S.E., Edinburgh, read a paper on 'Ventilation and Drainage.' What he would attempt in his paper, he said, was to lay down the general principles on which ventilation and drainage had been conducted both in human dwellings and in stables. They lived in a most practical age, and hygiene in all its scientific and practical bearings had come 'to stay.' With the better appointments on farm dwellings had come the better provision for animals. Dealing with the ventilation of stables, he said that, while roughly speaking a man was given 600 cubic feet of space, a horse was roughly given at between 3000 and 7000 cubic feet; but that was possibly too large, and the concensus of opinion seemed to point to something between 1600 and 1800 cubic feet, having a floor space of somewhat near 100 square feet, or 2 cubic feet for every pound of animal's weight. Many diseases due to bad ventilation were indicated, and windows, as introducing light, were very essential to health, and also served for ventilating purposes. Single-storied stables, if in an isolated district, were recommended, but in a crowded district perhaps it might be better to have a higher level. As to drainage, he said that matters pertaining to this subject had been much more studied and worked up as regarded appliances than anything connected with ventilation. Drains, it was said, were best avoided, trusting to a well-laid floor with surface ruts to carry away water which ought to be freely used in flushing the stable. If drains were resorted so, they ought, like those in dwelling-houses, to be carefully ventilated. A discussion followed.

Professor SMITH, Principal of the Toronto Veterinary College, who was introduced as the pioneer of veterinary science in Canada, said it afforded him great pleasure to have had the opportunity of being present there that afternoon and meeting with so many members of the profession in this country. He was glad to say on looking round that room that there were four of his old fellow students present, although a great many years have passed since they occupied the benches in the old college in Clyde Street. He did not, however, come to that meeting with the view of taking any part in the discussion; he came rather with the object of being a patient listener. He was greatly pleased with the paper read by such an eminent authority as Dr. Hunter; and this he could say, that all of them who had had any exper-

ience in the treatment of the disease of horses and other domesticated animals had obtained valuable results from ventilation.

Principal McCall, Glasgow, said he had listened with the greatest interest to Dr. Hunter's paper, and speaking generally, he agreed with pretty well everything that had been said. If he did appear to disagree with Dr. Hunter on one or two points, he was sure it was owing more to misapprehension of what he said than to any real difference on matters of principle. In the first place, he understood Dr. Hunter to say that he preferred a stable of one storey, because with it it was possible to have ventilation thoroughly carried out. He quite admitted that it might be a more simple thing to ventilate a one storey stable than one with two or more stories, but he did not think that, even with a two or three storey stable, there was any great difficulty in carrying out a thorough system of ventilation. From the experience he had had in the city of Glasgow, he was of opinion that a three-storeyed stable was healthier on the top storey than anywhere else. In fact, in a city such as Glasgow, if he had the power he would object to stables being placed on the ground floor. He would reserve the ground floor for the storage of the vehicles, &c., and put the horses on the higher floors. Horses suffering from chest diseases recovered much more quickly on the top than on the bottom storey. He was particularly pleased with Dr. Hunter's remarks about drainage. He himself, if he were building a stable, would not spend a single shilling on drains on the surface. With proper care and attention there was no difficulty in keeping a stable sweet without them. They were also quite at one in regard to the superficial capacity of the stable. In the case of a single stable, a width of 18 feet was, he thought, all that was required. For a double stable there should be at least 25 feet from wall to wall, and in both cases the trevises should be 9 feet in depth, so as to prevent the horses interfering with each other. The cubic capacity that made one stable healthy might not be sufficient in the case of another; a good deal depended on the attention given to the animals. He would have stables thoroughly cleaned out at least once every day, and if that was done, it stood to reason that they could do with less cubic capacity than in a stable where the droppings, &c., were allowed to collect for a longer period. He could not too severely condemn the practice that obtained in some parts of the country of allowing loose-boxes where young horses were kept to remain uncleaned sometimes for months on end. Hay lofts were often serious obstacles to proper ventilation, and on that account he thought they should never be constructed over stables.

Professor Dewar, Edinburgh, said he agreed with everything that had been said in regard to the sanitation of stables. Dr. Hunter seemed to depreciate the advantages of ventilation. He himself had always had the greatest faith in ventilation, and that faith was not weakened by the remarks of Professor M'Call. They would all agree with that gentleman when he said that the higher-storey stables were always the healthier, and that in itself was excellent evidence of the value of plenty of fresh air. Dr. Hunter must have made a mistake with his figures in regard to the size of stables. He was probably about right in placing the width of a single stable at 18 ft., but 25 ft., only 7 ft. more, was surely too small for a double stable. Apart from the question of cubic capacity, would not a stable of this width be apt to lead to accidents through the horses stretching back and probably coming into contact with each other? He agreed with everything that had been said about underground drains, being of opinion that they should, as far as possible, be avoided in the case of stables as well as of byres.

Mr. Rutherford, Edinburgh, said the ventilation received from the crevices of the door would, in his opinion, be quite insufficient to maintain a horse in health, unless he were out of doors eighteen out of the twenty-four hours. His experience was that it was of the utmost importance that the foul air generated by the horses should have rapid and easy means of escape, and in several large stables recently constructed, with which he was connected, they were careful to see that the horses had not only plenty of fresh air at their head, but plenty of light as well. The most perfectly healthy stable he knew of had a window to each stall, in addition to being wide and roomy, and having abundant fresh air accommodation. He agreed with Professor M'Call that stables for horses should be 9 ft. deep and not less than 6 ft. wide. They might even go the length of 6 ft. 6 in.; but 7 ft. was too much, as at that width the horses might turn round, and accidents occur. He was a thorough believer in the value of thorough ventilation; and in this connection he was bound to say that, in the designing of stables, architects did not know their business. He rarely looked at a new stable with which he did not find fault, and it was generally on the score that it was much too æsthetic and not sufficiently airy. Architects appeared to look far too much to effect, and not enough to the comfort and well-being of the occupants. Only recently plans for a new fifty-horse stable and corresponding warehousing accommodation were submitted, and he at once took exception to them, on the ground that the horses were below and the warehouses above. He advised that the arrangement be exactly reversed, for he was distinctly of Professor M'Call's opinion that, in a crowded situation, the horses ought always to be on the higher storeys. He agreed with Dr. Hunter that there should be no drainage communication with the interior of a stable. Time after time, in some of the newest stables in Edinburgh, small coach stables as well as in large stables, he had had to contend with continual ill-health amongst the horses, and in almost each case it was found that the drains opened into the building. When these were closed up and the drains overhauled the outbreaks invariably disappeared.

Mr. Mitchell, Glasgow, said he agreed with all that had been said as to the advantages of ventilation. One thing, however, had been omitted, and that was the dunghill. In Glasgow they generally had the dunghill situated near the stable, and he should like to hear suggestions as to where it should be put down. In the West Indies they got over all difficulties from this source by having the manure dried in the sun every morning.

Mr. Anderson, Glasgow, agreed generally with what had been said about the value of ventilation, and the disadvantages of underground drains. He thought there could be little doubt that the healthiest stables in Glasgow were those that were on the higher storeys. He always liked plenty of windows in a stable, and the back one should flush with the ceiling, so as to let the foul air escape without coming down.

Principal Williams said there seemed to be some misconception as to what Dr. Hunter had said in regard to the construction of stables. As he understood him, he did not suggest that stables should be only one storey in height in crowded situations. It was only when they were in exposed situations that the single storey stables might prove the best. He agreed with everything that had been said in regard to the sanitation and ventilating of stables. His experience could take him back to diseases due to bad drainage and bad ventilation which had now all but ceased to exist. There was periodic ophthalmia, for instance, and glanders was not now nearly so prevalent as it used to be. He had no underground drains at the New College, contenting himself with having the boxes regularly and thoroughly cleaned. His boxes were all open, and the horses under treatment could stand all day long with their heads out. The

animals seemed to enjoy it, and they recovered all the sooner for it. There was nothing worse for animals in ill-health than a contaminated atmosphere.

Mr. J. M'LAUCHLAN YOUNG, Dundee, and the question, 'What was contaminated air?' was of considerable importance. Dr. Hunter had stated that men were not only able to live, but to thrive, in sewers. This matter had recently been investigated in Dundee, with the curious result that fewer microbes were found in the atmosphere of sewers than in the ordinary atmosphere above ground. He did not offer any definite opinion, but it might be that the accumulation of carbonic acid gas which went on in the sewer was fatal to certain germs. When the gas was allowed to escape, as it did through drain openings, it had not the same chance of acting on disease germs.

The CHAIRMAN, in closing the discussion, said he did not, like some speakers, advocate the placing of windows at the head of each stall. Many horses had had their sight spoiled through having a window in front of them. In regard to the plan of having the horses stabled on the top storey of buildings, he would just like to know what insurance company would insure horses housed there as cheaply as they would on the ground floor, and the question of insurance was a matter of considerable importance nowadays to many owners.

Dr. HUNTER, in replying, said he was obliged to Principal Williams for the explanation of his remarks in regard to the construction of stables. What he had said was that, in an open situation, military and other authorities were practically agreed that the single storey stable was the best, but that, when the situation was crowded, it might be necessary to have the horses above the ground floor. It was the same with a stable as with any other building; they had to consider their surroundings. He had intended in his paper, if time had permitted, to have said something on the question of light as an influence of health. There could be no doubt that it was a most important consideration, especially in the case of animals that lived in the open. It was quite a mistake to suppose that he deprecated the value of ventilation. He only gave figures to show what could be done in the way of ventilation, and that in the construction of stables and other buildings it was very frequently overdone. A very common plan in the construction of stables was to have the door about the centre of the rear wall, or immediately behind the horses. A much better plan was to have the door in the gable, but, better still, sacrifice a stall and have the door facing the horses. In this position they were much better able to withstand drafts than they were when the door was behind them. The dunghill should, of course, be as far away as possible from the stable, and they should guard against the heaps getting unduly large, for it was only when it was built together in big quantities that there was risk from decomposition and other causes.

Mr. H. THOMPSON, Aspatria, contributed a paper on Anthrax. The discussion was adjourned until next meeting.

On the motion of the Chairman, Professor Smith, Toronto, was elected an honorary member of the Society. The usual votes of thanks were passed to the readers of the papers, and thereafter the proceedings terminated.

### DINNER.

The members afterwards dined together—the president again presiding. Mr. Peter Moir, Edinburgh, secretary, acted as croupier. Dinner over, the president proposed in succession the toasts of 'The Queen,' 'The Prince and Princess of Wales and the other Members of the Royal Family,' and 'The Navy, Army, and Reserve Forces,' Dr. James M'Intosh M'Call, as a member of the Yeomanry, replying for the latter.

Dr. HUNTER proposed 'The Royal College of Veterinary Surgeons,' alluding to the fact that they had present with them on that occasion no fewer than four members of the Council of that august body—Principals Williams and M'Call, Mr. Harry Thompson, Aspatria; and Professor W. O. Williams, Edinburgh, the latter of whom was the youngest gentleman that had ever been elected to that important post, and with his father, Principal Williams, established what he believed was a unique position, so far as the veterinary profession was concerned, viz., the position of father and son occupying a seat on the governing body of the profession at one and the same time. Most of them were aware what the Royal College had done for the veterinary profession. Some members seem to think that they would get on very well without it; but, however well some members might do, there was a general opinion that in a body so large as the veterinary profession they required some guidance, and perhaps it was best to have one central college situated in London to look after their interests. At the same time, they were not blind admirers of the Royal College, and could easily see that unless it were properly managed it might not do all the good to the members that it ought and might do.

Principal WILLIAMS, who replied, said he spoke in the presence of a great reformer, Mr. Thompson, but he really thought that of late they had been reforming rather fast. Their desire for fresh legislation had outrun the bounds of reason. He considered it was nothing short of a hardship to prescribe for veterinary students examinations equal to those prescribed for the medical profession. Their students were also to be required to stay four years at college as a minimum. That might be quite right and proper for a medical student; but in the case of a veterinary student, who had not the same prospects of remuneration, three years was a long enough term—at least as a minimum. There was no chance of really undeserving students getting through with this system, as they always had the examination as a check; but it was decidedly unfair to keep a man four years at college if he could satisfy the examiners at the end of his third year. This was a question which affected members of the profession very deeply, and at meetings of that kind they would do well to take the matter into their serious consideration and bring pressure to bear on the Council. The veterinary profession was yearly becoming more and more a family matter, and under the new arrangements it would be more and more difficult for the sons of practitioners to enter it. There were some men in the profession who seemed anxious to have it converted into a co-operative or protection society, who seemed to think there was only one man in the world, and that was themselves, and only one profession in the world, and that was their own.

Mr. RUTHERFORD, in proposing 'Kindred Societies,' expressed his regret that they had not had a larger gathering on the occasion of their visit to Glasgow. He missed several gentlemen who had taken a leading part in bringing that meeting about, and he hoped business, and only business, prevented them from being present. For some reason or other, the members of the profession did not support these Society meetings in the way that they ought. He had often wondered whether they would not be better with one large and really good Scottish Society, meeting alternately in the different towns, than with two or three district societies meeting always in the same place, and generally only very moderately attended.

Mr. ANDERSON, secretary of the West of Scotland Society, in reply, said they had only to be secretary of a veterinary society for six months to see the marvellous apathy in regard to the welfare of the profession that existed amongst its members. They would send out probably 200 circulars about a meeting, and they would

get back about six replies—(laughter). They would send out 100 notices requesting payment of subscriptions in arrears, and they would very probably get three replies—(renewed laughter). In Glasgow they had had great difficulty in keeping the Society going at all, but he was thankful to say it was still alive and financially as sound as ever it was. To show the difficulties they had to contend with, he had only to mention that not very long ago one member left them on the ground that his speeches were not reported at long enough length in the papers. (Laughter). Yet it was a fact that that same member took twenty minutes to say what any ordinary man would say in less than five. (Renewed Laughter).

Mr. M'Lauchlan Young proposed the 'Teaching Schools,' and in reference to the remarks of Principal Williams on the extended course, said he had no doubt that the various colleges would do their best to face the new burdens that had been forced upon them, and that, in any event, the interests of the students would not be allowed to suffer—(applause).

Principal M'Call, who replied, said he had special pleasure in replying to this toast in the presence of his old friend, Professor Smith, of Toronto. It was a curious coincidence between them that he himself had originally been appointed to the post which Professor Smith now occupied with so much distinction to himself and advantage to the people of Canada. In regard to Mr. Young's remarks on the Home Colleges, he, with him, was sure that these colleges would do their best to see that the poor students did not suffer through the changed condition of things. He quite agreed with Professor Williams that the Council, by its action, had thrown a new and, in his opinion, unnecessary burden on the shoulders of parents and others who wished to educate their charges for the veterinary profession. He had made an estimate, and he found that under the new regulations it would cost parents not less than £500 to place their sons in the profession.

Mr. H. Thompson: More.

Professor M'Call said he knew he was rather under than over the mark. Four years was the minimum, but in the case of many students it would take six, and the average could not be put under five. The new law had been passed, but fortunately it was not unalterable—(applause). He had been a teacher for thirty-seven years, and personally he was of opinion that in the present state of matters the three years' limit was quite sufficient. The past season was the only one in his experience in which it was a case of spinning out lectures, taking against time as it were. That, he need hardly tell them, was not a very satisfactory state of affairs. The Dick College in Edinburgh had always hitherto done well by the students, but he could not refrain from telling them there that but for the tactics pursued by the Principal of that College they would not have been discussing a four years' limit as a practical reality on that occasion. He had no doubt the thing was done for the best; he hoped it would lead to good in the end; but in the meantime it imposed an additional burden on the students, which very many of them would find very difficult to bear.

Professor Williams proposed the health of Professor Smith, alluding to his eminence as a veterinarian and the universal esteem in which he was held by the profession at large.

Professor Smith thanked them all for the more than cordial reception they had given him. He had had very great pleasure indeed in being present at that day's meeting listening to the highly interesting remarks that had been made, and also in meeting so many friends of bygone days. He had gone to Canada with a good deal of trepidation, but by hard work and an honest endeavour to inculcate those principles which had been infused into his mind by the late Professor Dick, whose name he still revered, he was thankful to say he had been so far successful, and had raised up an institution which was held in the very highest repute, not only in Canada, but in the United States as well. During the last few years especially they had had very large attendances. Turning to general veterinary topics, Professor Smith said they had lately heard a good deal about the embargo that had been placed on Canadian cattle. Speaking as an inspector of Ontario, he could say that pleuro-pneumonia in cattle was quite unknown in that province, and they in Canada felt strongly that a mistake had been made somewhere.

A number of other toasts were duly proposed and responded to, and with songs and recitations a very pleasant evening was spent.—*The North British Agriculturist.*

## EXTRACTS AND NOTES.

### THE RIDDLE OF EVOLUTION.

In the remarkable address delivered by the Marquis of Salisbury before the British Association at Oxford, no section is more interesting and suggestive than the following on evolution.

"If we are not able to see far into the causes and origin of life in our own day it is not probable that we shall deal more successfully with the problem as it arose many million years ago. Yet certainly the most conspicuous event in the scientific annals of the last half century has been the publication of Mr. Darwin's work on the "Origin of Species," which appeared in 1859. In some respects, in the depth of the impression which it made on scientific thought, and even on the general opinion of the world, its momentous effect can hardly be overstated. But at this distance of time it is possible to see that some of its success has been due to adventitious circumstances. It has had the chance of enlisting among its champions some of the most powerful intellects of our time, and perhaps the still happier fortune of appearing at a moment when it furnished an armoury of weapons to men who were not scientific for use in the bitter but transitory polemics of the day. But far the largest part of its accidental advantages was to be found in the remarkable character and qualifications of its author. The equity of judgment, the simple-minded love of truth, and the patient devotion to the pursuit of it through years of toil and of other conditions the most unpropitious—these things endeared to numbers of men everything that came from Charles Darwin apart from its scientific merit or literary charm; and, whatever final value may be assigned to his doctrine, nothing can ever detract from the lustre shed upon it by the wealth of his knowledge and the infinite ingenuity of his resource. The intrinsic power of his theory is shown at least in this one respect—that in the department of knowledge with which it is concerned it has effected an entire revolution in the methods of research. Before his time the study of living nature had a tendency to be merely statistical; since his time it has become predominantly historical. The consideration how any organic body came to be what it is occupies a far larger area in any inquiry now than the mere description of its actual condition; but this question was not predominant—it may almost be said to have been ignored—in the botanical and zoological study of sixty years ago.

Another lasting and unquestioned effect has resulted from Darwin's work. He has, as a matter of fact, disposed of the doctrine of the immutability of species. It has been mainly associated in recent days with the

honoured name of Agassiz, but with him has disappeared the last defender of it who could claim the attention of the world. Few now are found to doubt that animals separated by differences far exceeding those that distinguish what we know as species have yet descended from common ancestors; but there is much less agreement as to the extent to which this common descent can be assumed or the process by which it has come about. Darwin himself believed that all animals were descended from "at most four or five progenitors," adding that "there was grandeur in the view that life had been originally breathed by the Creator into a few forms or one." Some of his more devoted followers, like Professor Haeckel, were prepared to go a step further and to contemplate a crystal as the probable ancestor of the whole fauna and flora of this planet.

To this extent the Darwinian theory has not effected the conquest of scientific opinion; and still less is there any unanimity in the acceptance of natural selection as the sole or even the main agent of whatever modifications may have led up to the existing forms of life. The deepest obscurity still hangs over the origin of the infinite variety of life. Two of the strongest objections to the Darwinian explanation appear still to retain all their force.

I think Lord Kelvin was the first to point out that the amount of time required by the advocates of the theory for working out the process they had imagined could not be conceded without assuming the existence of a totally different set of natural laws from those with which we are acquainted. His view was not only based on profound mechanical reasoning, but it was so plain that any layman could comprehend it. Setting aside arguments deduced from the resistence of the tides, which may be taken to transcend the lay understanding, his argument from the refrigeration of the earth requires little science to apprehend it. Everybody knows that hot things cool, and that according to their substance they take more or less time in cooling. It is evident, from the increase of heat as we descend into the earth, that the earth is cooling, and we know by experiment, within certain wide limits, the rate at which its substances, the matters of which it is constituted, are found to cool. It follows that we can approximately calculate how hot it was so many million years ago; but if at any time it was hotter at the surface by 50°F. than it is now life would then have been impossible upon the planet, and therefore we can without much difficulty fix a date before which organic life on earth cannot have existed. Basing himself on these considerations Lord Kelvin limited the period of organic life upon the earth to a hundred million years, and Professor Tait in a still more penurious spirit cut that hundred down to ten; but on the other side of the account stand the claims of the geologists and biologists. They have revelled in the prodigality of the ciphers which they put at the end of the earth's hypothetical life. Long cribbed and cabined within the narrow bounds of the popular chronology, they have exulted wantonly in their new freedom. They have lavished their millions of years with the open hand of a prodigal heir indemnifying himself by present extravagance for the enforced self-denial of his youth; but it cannot be gainsaid that their theories require at least all this elbow-room. If we think of that vast distance over which Darwin conducts us from the jelly-fish lying on the primeval beach to man as we know him now, if we reflect that the prodigious change requisite to transform one into the other is made up of a chain of generations, each advancing by a minute variation from the form of its predecessor, and if we further reflect that these successive changes are so minute that in the course of our historical period—say 3000 years—this progressive variation has not advanced by a single step perceptible to our eyes in respect to man or the animals and plants with which man is familiar, we shall admit that for a chain of change so vast, of which the smallest link is longer than our recorded history, the biologists are making no extravagant claim when they demand at least many hundred million years for the accomplishment of the stupendous process. Of course, if the mathematicians are right the biologists cannot have what they demand. If, for the purposes of their theory, organic life must have existed on the globe more than a hundred million years ago, it must, under the temperature then prevailing, have existed in a state of vapour. The jelly-fish would have been dissipated in steam long before he had had a chance of displaying the advantageous variation which was to make him the ancestor of the human race. I see, in the eloquent discourse of one of my most recent and most distinguished predecessors in this chair, Sir Archibald Geikie, that the controversy is still alive. The mathematicians sturdily adhere to their figures, and the biologists are quite sure the mathematicians must have made a mistake. I will not get myself into the line of fire by intervening in such a controversy. But until it is adjusted the laity may be excused for returning a verdict of "Not proven" upon the wider issues the Darwinian school has raised.

The other objection is best stated in the words of an illustrious disciple of Darwin, who has recently honoured this city by his presence—I refer to Professor Weismann. But in referring to him I cannot but give, in passing, a feeble expression to the universal sorrow with which in this place the news was received that Weismann's distinguished antagonist, Professor Romanes, had been taken from us in the outset and full promise of a splendid scientific career. The gravest objection to the doctrine of natural selection was expressed by Weismann in a paper published a few months ago, not as agreeing to the objection, but as resisting it, and therefore his language may be taken as an impartial statement of the difficulty. "We accept natural selection," he says, "not because we are able to demonstrate the process in detail, not even because we can with more or less ease imagine it, but simply because we must—because it is the only possible explanation that we can conceive. We must assume natural selection to be the principle of the explanation of the metamorphoses, because all other apparent principles of explanation fail us, and it is inconceivable that there could yet be another capable of explaining the adaptation of organisms without assuming the help of a principle of design." There is the difficulty. We cannot demonstrate the process of natural selection in detail; we cannot even, with more or less ease, imagine it. It is purely hypothetical, No man, so far as we know, has ever seen it at work. An accidential variation may have been perpetuated by inheritance, and in the struggle for existence the bearer of it may have replaced, by virtue of the survival of the fittest, his less improved competitors; but as far as we know no man or succession of men has ever observed the whole process in any single case, and certainly no man has recorded the observation. Variation by *artificial* selection, of course, we know very well; but the intervention of the cattle breeder and the pigeon fancier is the essence of artificial selection. It is effected by their action in crossing, by their skill in bringing the right mates together to produce the progeniture they want. But in natural selection who is to supply the breeder's place? Unless the crossing is properly arranged the new breed will never come into being. What is to secure that the two individuals of opposite sexes in the primeval forest, who have been both accidentally blessed with the same advantageous variation, shall meet and transmit by inheritance that variation to their successors? Unless this step is made good the modification will never get a start, and yet there is nothing to ensure that step except pure chance. The law of chances takes the place of the cattle

breeder and the pigeon fancier. The biologists do well to ask for an immeasurable expanse of time if the occasional meetings of advantageouly varied couples from age to age are to provide the pedigree of modifications which unite us to our ancestor the jelly-fish. Of course, the struggle for existence and the survival of the fittest would in the long run secure the predominance of the stronger breed over the weaker. But it would be of no use in setting the improved breed going. There would not be time. No possible variation which is known to our experience, in the short time that elapses in a single life between the moment of maturity and the age of reproduction, could enable the varied individual to clear the field of all competitors, either by slaughtering or starving them out. But unless the struggle for existence took this summary and internecine character there would be nothing but mere chance to secure that the advantageously varied bridegroom at one end of the wood should meet the bride who by a happy contingency had been advantageously varied in the same direction at the same time at the other end of the wood. It would be a mere chance if they ever knew of each other's existence—a still more unlikely chance that they should resist on both sides all temptations to a less advantageous alliance. But unless they did so the new breed would never even begin, let alone the question of its perpetuation after it had begun."

## THE CONGRESS OF HYGIENE.

The following description of the journey to Budapest is taken from a private letter.

Budapest, Sunday 2nd Sept.

"The International Congress of Hygiene was formally opened to-day by the brother of the Emperor of Austria, or perhaps I should say of the King of Hungary. Before saying anything of the Congress I may tell you something of the journey here. We were a party of five, and left London in charge of one of Cook & Sons conductors, *via* Dover to Ostend. From Ostend to Brussels the country is flat, and the fields are not separated by hedges. The people seem to be most industrious; every little corner is cultivated, and women do more than their share of field work. A most unusual sight to a Briton is to see the dogs harnessed to little carts. It looks cruel, but the animals showed no signs of discomfort or ill-usage and ran along quite gaily. In Belguim as in all the rest of the continent men in uniform are everywhere; soldiers, policemen, firemen and goodness knows how many kinds of inspectors are to be seen at every turn of the road.

A very curious absence of birds struck me. Save a crow or two I saw no birds in Belgium. Whether the people have killed and eaten all the small birds I do not know. Naturally I looked to see if the country was overrun with caterpillars, but trees and grass and grain and roots all looked bright. All the way from Ostend to Budapest the second crop of hay is being harvested, and I noticed a method of drying it in use all along the railway, especially in the mountain valleys where heavy rains are prevalent. A stout stick is driven into the ground and two sticks are nailed transversly on it—one on the top and the other about the middle of the upright. A row or two of these carry a lot of hay and at a distance look like a line of soldiers. The hay is just roughly thrown on them, and after a soaking rain is soon dry again. I wonder this practice is not adopted in the North of England where rain too frequently destroys the finest hay crops.

From Brussels we went through Germany *via* Metz and Stransburg to Bale in Switzerland.

Possibly ignorance of military matters made Metz disappointing. We expected to see forts and earth works everywhere, with soldiers and cannon. But nothing of the sort. Only unromantic houses with railway sheds and cattle trucks. Of course we passed innumerable battle fields—Waterloo, Gravelotte and Wagram being amongst them. They were always "over there" or "somewhere in that direction." The information was not very useful, but travellers with a proper feeling and after a few hours with a guide book are able to tell their friends on returning home very interesting facts about these places, and if gifted with a little imagination may venture on descriptions of the localities.

On Tuesday night we arrived at Basle and got our first view of the Rhine. This portion of the river presents no very striking or attractive features, in fact up to this portion of the journey nothing in the way of scenery approached the beauty of the Thames at Richmond or at Cookham. A rather curious object which we passed on Tuesday was a stork's nest. It was about the size of a clothes basket and rested prominently on the top of the bellfry of a small chapel. We were told that storks often build their big ugly nests on chimney tops or on the bellfries of chapels and that no one disturbs them—probably for the same reason that some folks at home permit a ladybird to remain where it alights—some notion of luck.

From Basle we travelled on Wednesday to Innsbruck through the Arlberg valley. This railway through the Tyrol discloses a panorama of the greatest beauty. It runs along the side of the mountains gradually rising nearer and nearer their higher points till it reaches a height of about 4000 ft. Above you are the highest peaks, some few snow-topped; below in the valley green fields and little houses with the road and river winding along. Distinctly ventursome must have been the engineer who planned and made this railway which runs along the side of sheer precipses and winds round the mountains at dizzy heights. In some places the line is solidly maintained on the edge of an abyss by stone work, in others it is carried over a chasm by a bridge which though strong is almost invisible. Only in the worst places has the engineer been driven to tunnels, and through these the train rushes to shortly appear again and wind round the side of the mountain. It is a single line and although the beauty and grrndeur of the scenery more than compensates for the long journey and the smoke and blacks from the engine, one cannot altogether forget the eerie sensations produced at some points by looking out of the carriage window.

At night we stayed at Innsbruck, the capital of the Tyrol, and my only regret is not being able to stay there a week. It is a historic and romantic town and a fit capital for the simple and heroic people who inhabit the hills and valleys around.

Our next stopping place was Vienna—a town of wide streets and magnificent buildings. I think we have quite as good, if not better in London, but they are not displayed as they are here. Electric and horse tramcars run along the streets and cabs are replaced by victorias—some with one horse, some with a pair. It is odd to an Englishman to see the one-horse traps drawn by one horse alongside a pole. Shafts are not often used. Most of the light harness is supplied with a breast-strap instead of a collar, and the horses are shod with calkins or removable steel studs fore and hind. All the streets are paved with square stones.

From Vienna we travelled through to Budapest. The first part of the journey is through a flat country, the final half through a hilly land with mountains in the distance. In Belgium and Germany the farms all seemed to be small, and the cultivation more resembled market gardening than the system of farming adopted at home. In Austria-Hungary the farms seemed larger

and the agriculture more closely resembled our own. Hungary is essentially 'horsey.' The horses up to 15.2 are good looking, hard and useful. Over that height they are leggy. There are a large proportion of greys and not a few odd coloured ones. The street vehicles in Budapest are tramcars and victorias. The victoria drivers are skilful but rash and reckless. Hardly ever do you see a street victoria going less than eight miles an hour. The best turnouts have a pair of horses and they rush through the streets at ten and twelve miles an hour. Very few bent legs are seen, but all the horses look a bit poor in condition—this is perhaps more comparative than absolute, due to the fact that in England most horses are too fat.

Sunday is a busy day here. All the cafés are in full swing and the Congress opening has made the day one of extra activity. The opening ceremony was very effective, court dresses and military uniforms were varied and gay. The National dress includes a good deal of fur, and as we civilians felt the heat with only the scantiest clothing permitted by conventional propriety, I felt sympathy for many of the grandees present.

In the evening there was a Court presentation at the Grand Duke's Palace. It was held in a noble marble hall but the crush was so great I refrained from forcing myself upon the notice of His Majesty. To-morrow the Congress commences business.

## Imperial Live Stock Insurance Association, Limited.

The practice of insuring horses and other live-stock against the many contingencies to which they are liable is becoming so general, while at the same time so little is really known of the financial conditions under which the business is carried on, that we open with considerable interest the report of the Imperial Live Stock Insurance Association. From this report and other papers relating to the association which accompany it, it is clear that the record of the concern has been a useful one, and that its position and prospects are decidedly healthy. All things have to have a beginning, and a momentary glance at the history of the particular company in question shows that since 1879, the first year of its existence, when it issued the modest number of 447 policies, and was content with a net premium income of £1,471, every year has witnessed a steady and continuous growth in the volume of business transacted, and in the ground which that business has covered. The total amount of claims paid during the whole period under reviews exceeds £73,000. The receipts for the last twelve months were £18,129. Of this sum £9611 has been disbursed in payment af claims; £6746 in working expenses, including agency, veterinary surgeons' fees, office expenses, &c.; and a small sum in temporary expenditure connected with the recent removal to new and larger premises. Out of the amount remaining, a dividend of 7 per cent. on the paid-up capital has been distributed, and a balance carried to the next account. In these days of anti-capitalism and of mutual insurance it will probably afford some satisfaction to those who insure with this company to know that, out of a premium income of over £17,000, less than £550 has gone to the shareholders of the concern.

The duly certified balance-sheet of the association indicates a strong financial position. It enables us to understand why the new shares issued by the company last year were alloted at a premium, and why this office is more than able to hold its own against the rivalry always engendered by success—a rivalry which is rapidly becoming as keen in this as it has long been in the more beaten tracks of the insurance world.—*Insurance and Banking Review.*

## The "Dogs First Bite" Fallacy.

It has been repeatedly stated in comments on cases in which persons have brought actions to obtain damages for having been bitten by dogs, that dogs are entitled to one bite free, or, in other words, that the action fails unless it can be proved that the dog has previously bitten someone, and that such biting was known to its owner. This is incorrect, as we have more than once explained, and the case of "Haydon *v.* Maxwell," which came before Mr. Justice Grantham and a common jury recently illustrates very clearly the state of the law on this particular point. The person bitten was a little boy, who in September last was sent on a matter of business to Mr. Maxwell's Farm, at Tooting Graveney. In the farmyard was a kennel, over which was a notice "Beware of the dog." The boy did not see the notice, and as he was passing the kennel a large retriever sprang out and bit him severely on the leg. The dog was chained by a 7ft. chain. There was no dispute as to the boy having been bitten, but there was no evidence to show that the dog had previously bitten anyone. Witnesses were called to prove that the dog was in the habit of barking at strangers who crossed the yard, and that he would strain at the chain in the endeavour to get at them.

It was urged that there was no case to go to the jury, and that there was no instance of a person being held responsible for injuries inflicted by a dog which was chained up, and that there was no evidence to show that the owner knew that his dog was likely to bite people. Mr. Justice Grantham, however, refused to stop the case, and alluded to a case tried before him in which a person obtained damages in respect of a bite from a dog which had broken his chain. Mr. Maxwell, the defendant, who gave evidence, said the dog was not of a savage disposition and that it had not, to his knowledge, bitten anyone previously. He admitted, however, that it was fierce with strangers. The judge directed the jury that it was unnecessary to prove that Mr. Maxwell was aware of the dog having previously bitten anyone. It was quite sufficient to show that the owner in such cases as this knew the dog to be of a ferocious disposition and likely to bite mankind. In his opinion the kennel was not in a safe position, because persons necessarily passed within reach of the dog when on their way to one of the farm buildings. The jury found in favour of the boy, and mulcted the defendant of £50 in damages. It is not improbable that they were influenced by the fact of the notice above the kennel, which certainly indicated that the dog was dangerous to the knowledge of its owner. It would seem, indeed, from this case that any person who keeps a dog which, when chained up, is, as many dogs are, of a fierce disposition, is liable to be mulcted in damages if the dog bites anyone who is not a trespasser.—*The Field.*

## Doctors Differ in the Show-yard.

Before Horse Show week ends it is well that the attention of the Royal Dublin Society authorities should be directed to a matter which has been much discussed by exhibitors. They, not the society, make the show; the public maintain it, and both are entitled to some consideration. What exercises the temper of the exhibitors more than anything else is the divergence of opinion that often arises amongst the veterinary experts who examine the horses selected by the judges for awards, and the absence of any "Court of Appeal" when a difference arises.

A notable example of the manner in which this omission affects exhibitors has been brought to our notice. Mr. Arnold, of Gormanstown, exhibited a five-year-old weight-carrying hunter (No. 215 in the catalogue), and the animal was one of ten selected by the judges and

sent to the veterinary paddock for examination. Of the ten, only two were passed sound by Mr. C. Allen, V.S., and Mr. Webster, V.S., Mr. Arnold's horse being amongst those "cast." Dissatisfied with this decision, Mr Arnold had the animal examined on the following morning by Mr. Freeman, V.S., who passed him sound. On Friday the horse came again before Mr. Allen, who again rejected him, endorsing his certificate with the following remark, "The cause of unsoundness is disease of the respiratory organs known as whistling." Being determined to test the matter further, Mr. Arnold obtained the joint opinion of four veterinary surgeons, Messrs. Freeman, P. A. Lawler, George Newsom, and T. D. Lambert—gentlemen of acknowledged eminence in their profession—and the four signed a joint certificate to the following effect:—"In our opinion the animal is sound in his wind."

We do not impugn Mr. Allen's judgment. It is an old saying that doctors differ, but unfortunately when they do the patient suffers, and in this case it is the exhibitor who suffers a heavy financial loss. Unquestionably, if the opinion spreads amongst exhibitors that by bringing their horses to the Show they run the risk of loss, they will consult their own interest and cease to patronise it. It is a matter that the Royal Dublin Society should look to, and, where differences do arise, an appeal should be allowed.—*The Irish Daily Independant.*

## Personal.

APPOINTMENT.

Mr. J. W. CROWHURST, F.R.C.V.S., has been appointed lecturer on veterinary science and animal physiology at the Government Agricultural School, Victoria College, Stellenbosch (Cape).

## ARMY VETERINARY DEPARTMENT.

From *The London Gazette* of 4th Sept. 1894.

1st Devon, Western Division, Royal Artillery—Veterinary-Lieut. J Heath resigns his commission, also, is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement.

1st North Riding of Yorkshire, Western Division, Royal Artillery—Robert Elliott, Gent. to be Veterinary-Lieutenant. Dated 5th Sept., 1894.

CIVIL VETERINARY DEPARTMENT IN INDIA.

The annual administration report of the Department for the official year 1892-93, as submitted by Vet. Lieut.-Col. Hallen, C.I.E., represents the period of transition. The new department provides superior posts for 16 officers, all of which are now filled; but owing to the fact that the proposed furlough and pension rules have not yet been authoritatively issued, the conditions of service in the new department are undefined, and the administration of the department cannot therefore be so effectively carried on as when the position of officers is more assured. The development of old horse-breeding department has been most satisfactory, and the Government of India convey their thanks to officers who have carried on the work of the new department with great zeal under the Inspector-General, especially to Vet.-Major Rayment, Vet.-Capts. Nunn, Morgan, Mills, and Gunn, and Vet.-Lieuts. Pease and Evans' report is generally favourable. The reports received from the Central Provinces indicate improvement in most districts.—*Army and Navy Gazette.*

Veterinary-Major Longhurst serves as Divisional Vet.-Officer to the Cavalry Brigade which left Aldershot for Churn, on August 30th.

## CORRESPONDENCE

### PASTERNS.

SIR,

I was speaking to a gentleman from Lincolnshire the other day, and he was telling me that they are breeding all Shire cart horses down there with long pasterns and that it is the recognised kind of pastern for them, my opinion being that short pasterns are the kind I consider best to draw heavy weights. I should like your opinion, Mr. Editor, also those of your numerous readers on the subject. I have had forty years experience with cart horses and I always found the long pasterns come to grief much sooner than short ones, the same with nag horses, although it is allowed they are more easy to ride, but I do not like long pasterns for either class of horses.—Yours faithfully,

J. WORSLEY, M.R.C.V.S.

P.S.—This gentleman said my ideas were old, and all the V.S's in his county upheld the long pasterns. I thought they had not had such practical experience as I have had, living in Lancashire for over twenty years, to see cart horses draw five or six tons on a lurry all day long, they would soon break down in my opinion with long pasterns.

### THE DEATH OF BULLINGDON.

SIR,

In the letter by Mr. Edwards on the above subject in your issue of the 25th August, he asks Mr. Charnock to state step by step the causes which led this animal to die of pneumonia after a severe injury to the hock.

The paragraph to which Mr. Edwards refers in your issue of the 18th August, would appear to have been taken from a newspaper report, where it would be desirable to condense information as far as possible, and avoid any lengthy description of complications which could not be followed by a layman.

Mr. Charnock not having replied to Mr. Edwards' query, the latter may be left under the impression that there could be no connection between an injury to the hock and lung mischief, but such is certainly not the case. There is a very close connection between any injury, and especially joint injury, and lung trouble, not directly it is true by the extension of any inflammatory trouble, but indirectly through the absorbtion of septic products.

I have no more knowledge of the case than that gained by reading your paragraph, but the impression left on me is that the disease from which this animal died was septic pneumonia—an affection only too common amongst horses—and that the septic products were taken up by the veins leading from the diseased hock and arrested in the capillaries of the lung, where they rapidly gave rise to pneumonia, abscesses and death.

If this should happen not to be the explanation in the case of "Bullingdon," it is certainly the explanation of many cases of joint and other troubles which in my experience have been followed by septic pneumonia.—Yours truly,

PRACTITIONER.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. A. E. Shorten, E. Wallis Hoare, F. Hobday, R. C. Tayler, J. Abson. *Report on Surra* (Bombay), *The Irish Daily Independent, The Aldershot News, Proceedings of the National Live Stock Sanitary Convention* (Washington, U.S.A.)